

Listing of Claims

1. (Original) A fluid level detection system for use with a pressurized tank containing a fluid, comprising:
 - a tank module means for detecting the fluid level within the tank and displaying the fluid level information, the tank module means comprising:
 - a magnetic sensing means for determining an angular position of a magnetic field of a magnet from a magnetic float gauge assembly connected to the tank and transmitting the angular position;
 - a microcontroller means for receiving the angular position information transmitted by the magnetic sensing means and translating it to a fluid level value that corresponds to a percentage of fluid remaining in the tank, and transmitting the fluid level value;
 - a display means which receives the fluid level value transmitted by the microcontroller means and displays the fluid level value;
 - a housing means for enclosing the magnetic sensing means, microcontroller means, and display means; and

wherein the tank module means is mounted to a gauge of the magnetic float gauge assembly.
2. (Original) The fluid level detection system of claim 1, wherein the tank module means further comprises an attachment means for attaching the tank module means to the gauge without physically modifying the gauge.
3. (Original) The fluid level detection system of claim 2, wherein the attachment means is attached to the gauge without interfering with the operation of the gauge.
4. Cancelled

5. (Original) The fluid level detection system of claim 1, wherein the tank module microcontroller means calculates the fluid level value that corresponds to the percentage of fluid remaining in the tank, regardless of the orientation of the mounted tank module means with respect to the gauge.

6. (Original) A remote fluid level detection system for use with a pressurized tank containing a fluid, comprising:

 a tank module means for detecting a fluid level within the tank and transmitting the fluid level information; and

 a display module means for receiving the fluid level information transmitted by the tank module means, and displaying the fluid level information;

 the tank module means comprising;

 a magnetic sensing means for determining an angular position of a magnetic field of a magnet from a magnetic float gauge assembly connected to the tank and transmitting the angular position;

 a microcontroller means for receiving the angular position information transmitted by the magnetic sensing means and translating it to a fluid level value that corresponds to a percentage of fluid remaining in the tank, and transmitting the fluid level value;

 a radio transmitting means for receiving the fluid level value from the tank module microcontroller means, and broadcasting the fluid level value;

 a battery means for powering the magnetic sensing means, tank module microcontroller means, and radio transmitting means;

 a housing means for enclosing the battery means, the magnetic sensing means, tank module microcontroller means, and radio transmitting means;

the tank module means being mounted to a gauge of a magnetic float gauge assembly;

the display module means comprising;

 a radio receiving means for receiving the broadcast fluid level value from the radio transmitting means and transmitting the fluid level value;

 a microcontroller means for receiving the fluid level value from the radio receiving means and transmitting the fluid level value to a display means which displays the fluid level value;

 a battery means for powering the radio receiving means, the display module microcontroller means, and the display means;

 a housing means for enclosing the display module battery means, the radio receiving means, the display module microcontroller means, and the display means.

7. (Original) The remote fluid level detection system of claim 6, wherein the tank module means further comprises an attachment means for attaching the tank module means to the gauge without physically modifying the gauge.

8. (Original) The remote fluid level detection system of claim 7, wherein the attachment means is attached to the gauge without interfering with the operation of the gauge.

9. Cancelled

10. (Original) The remote fluid level detection system of claim 6, wherein the tank module microcontroller calculates the fluid level value that corresponds to the percentage of fluid remaining in the tank, regardless of the orientation of the mounted tank module means with respect to the gauge.

11. (Original) The remote fluid level detection system of claim 6, wherein the tank module microcontroller further stores a number of calculated fluid level values.

12. (Original) The remote fluid level detection system of claim 11, wherein the tank module microcontroller means further calculates an average fluid level value from a predetermined number of stored fluid level values.

13. (Original) The remote fluid level detection system of claim 6, wherein the tank module means further comprises a timing means for communicating time information to the tank module microcontroller means.

14. (Original) The remote fluid level detection system of claim 6, wherein the tank module means continuously detects and transmits the fluid level to the display module means.

15. (Original) The remote fluid level detection system of claim 6, wherein the display module means displays the fluid level information continuously.

16. Cancelled

17. Cancelled

18. (Currently Amended) The remote fluid level detection system of claim 6 ~~13~~, wherein the tank is towed behind a tractor.

19-23. Cancelled

24. (Original) A remote fluid level detection system for use with a pressurized towed tank comprising;

a tank module comprising a housing, a magnetic sensor, a microcontroller, a battery, an attachment band, and an RF transmitter;

a display module comprising a housing, a microcontroller, a display, and an RF receiver;

wherein the tank module housing encloses the tank module microcontroller, magnetic sensor, tank module battery, and RF transmitter; and is attached to the attachment band;

wherein the magnetic sensor, tank module battery, and RF transmitter are each connected to the tank module microcontroller;

wherein the display module housing encloses the display module microcontroller, display module display, and the RF receiver; and

wherein the display module display and the RF receiver are each connected to the display module microcontroller.

25. (Original) The remote fluid level detection system of claim 24 wherein the tank module housing is mounted by the attachment band over a gauge of a magnetic float gauge assembly.

26. (Original) The remote fluid level detection system of claim 25 wherein the tank module is mounted to the gauge without interfering with the operation of the gauge.

27. Cancelled

28. (Original) The remote fluid level detection system of claim 24 wherein the tank module further comprises a display which is connected to the tank module microcontroller.

29. Cancelled

30. Cancelled

31. (Original) The remote fluid level detection system of claim 24, wherein the display module further comprises an audio transducer which is connected to the display module microcontroller.

32. (Original) The remote fluid level detection system of claim 24, wherein the display module further comprises a battery unit, housed within the display module housing, and connected to the display module microcontroller.

33. (Original) The remote fluid level detection system of claim 24, wherein the display module further comprises a power supply input which protrudes through a third aperture in the display module housing and is connected to the display module microcontroller.

34. (Original) The remote fluid level detection system of claim 24, wherein the display module further comprises a tractor ground speed input which protrudes through a fourth

aperture in the display module housing and is connected to the display module microcontroller.

35-42. Cancelled